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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,002	02/17/2004	Daniel F. Klessig	3670-P02652US01	9555

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EXAMINER	
IBRAHIM, MEDINA AHMED	
ART UNIT	**PAPER NUMBER**
1638	

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/780,002	KLESSIG ET AL.	
	Examiner	Art Unit	
	Medina A. Ibrahim	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20 and 22-50* is/are pending in the application.

4a) Of the above claim(s) *10-23,33-43 and 46-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-9 and 24, 26-30, 32, 44-45, and 50* is/are rejected.

7)☒ Claim(s) *2,3 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicant's response filed 01/30/06 in reply to the Office action of 09/23/05 has been entered. Claims 1, 7-8, 24, 27, 32 are amended. Claim 21 is cancelled. New claims 44-50 are added.

Newly submitted claims 46-49 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The nucleic acid of SEQ ID NO: 40 is structurally distinct from the nucleic acid sequences of SEQ ID NO: 1 and 36, and Applicant has not shown if these sequences are structurally related (i.e., if they are fragments to each other). These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 USC 121. Each sequence requires an independent search of the sequence databases. Searching all these the sequences in a single application would create search burden. This requirement is not to be construed as a requirement for an election of species, since each nucleic acid is not a member of single genus invention, but constitute an independent and patentably distinct invention.

SEQ ID NO: 1-2 and 36 are searched and examined in this application, and the search results of SEQ ID NO: 1-2 and 36 cannot be used to determine the patentability of SEQ ID NO: 40.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for

prosecution on the merits. Accordingly, claims 46-49 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

This application contains claims 10-20, 22-23 and 33-43 drawn to an invention nonelected with traverse in the reply of 08/25/05. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claims 1-9, 24-32, 44-45, and 50 are examined.

All previous rejections and objections not set forth below have been withdrawn in view of Applicant's amendment and/or upon further consideration.

Claim Objections

Claims 26 and 32 are objected to because each claim improperly depends from its parent claims. This objection is repeated for the reason of record as set forth in the last Office action of 09/23/05. Applicant's argument that the claims further limit the nucleic acid of claim 1 (d) is not deemed persuasive because the claims do not further limit the nucleic acid of claim 1, parts (a), (b) and (c). If Applicant intends, "(t)he method of claim 24, wherein the homolog comprises the nucleic acid molecule of SEQ ID NO: 36", the claim should be amended to recite as such. At claim 32, if Applicant intends, "(t)he transgenic plant of claim 28, wherein the homolog comprises the nucleic acid molecule of SEQ ID NO: 36", the claim should be amended to recite as such.

Claim Rejections - 35 USC § 112

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 27 is indefinite because it recites a product by process within the method steps, which is improper. Therefore, the metes and bounds of the claims are unclear.

Claim Rejections - 35 USC § 112

Claims 1, 4-9 and 24, 27-30, 44, and 50 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the isolated nucleic acid of SEQ ID NO: 1, a nucleic acid encoding SEQ ID NO: 2, an expression vector, a host cell and transgenic plant and plant cell comprising it, and a method of transforming a plant with said nucleic acid for enhanced disease resistance, does not reasonably provide enablement for an isolated nucleic acid molecule comprising a homolog or an ortholog of SEQ ID NO: 1 or its complement, a host cell and transgenic plant comprising it, and a method of inducing resistance against plant pathogens with any of said nucleic acid molecules . The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. This rejection is repeated for the reasons of record as set forth in the last Office action of 09/23/05. Applicant's arguments filed 01/30/06 have been fully considered and are not deemed persuasive.

Applicant asserts that the amended to the claims to recite "the" complement and "the" polypeptide would obviate this rejection. Applicant also asserts that the

specification fully enables the nucleic acid of claim 1. Applicant cites MPEP (2163) to support the enablement of the nucleic acid molecules that encode SEQ ID NO: 2 (response, p. 13, 1st full paragraph).

This is not persuasive because the rejected claims are drawn to nucleic acid molecules comprising "a homolog" and "orthologs", and "the complement of SEQ ID NO: 1 that induce disease resistance", transgenic host cells/plant and methods that employ said nucleic acid molecules rather than the nucleic acids encoding SEQ ID NO: 2 or the nucleic acid of SEQ ID NO: 1. The nucleic acid molecule comprising the complement of SEQ ID NO: 1 having disease resistance activity is rejected because the complement is the antisense strand and cannot encode a protein.

Applicant further asserts that the specification provides enablement of a homolog and ortholog of SABP2. Applicant argues that 18 sequences that are identified as SABP2 homologs and methods for identifying and obtaining a homolog and ortholog of SABP2 are exemplified in the specification Therefore, Applicant submit that the specification fully enables the nucleic acids as broadly claimed; Applicant requests that the scope of enablement rejection be withdrawn (response, paragraph bridging pages 14 and 14).

These are not persuasive because the claimed "homologs and orthologs" as defined in the specification are not supported by an enabling disclosure, taking into account the *In re Wands* factors discussed in the last Office action. The instant specification does not provide enablement for the broad scope of the claims encompassing a large number of nucleic acids having any percent of structural identity

to SEQ ID NO: 1, and those having any structural (any % of sequence identity) and functional similarity with an SABP2 nucleic acid. The instant specification does not provide guidance regarding how and where to modify an SABP2 sequence to obtain representative number of nucleic acids of the genus claimed. In addition, the disclosed 18 sequences identified as homologs and/or orthologs were not rejected for lack of enablement. Therefore, the rejection is proper.

Written Description

Claims 1, 4-9 and 24, 26-30, 32, 44-45, and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is repeated for the reasons of record as set forth in the last Office action of 09/23/05. Applicant's arguments filed 01/30/06 have been fully considered and are not deemed persuasive.

Applicant asserts that the amended to the claims to recite "the" complement and "the" polypeptide would obviate this rejection. Applicant also asserts that the specification provides written description for the nucleic acids of claim 1. Applicant cites MPEP (2163) to support the written description of the nucleic acid molecules that encode SEQ ID NO: 2 (response, p. 13, 1st full paragraph).

This is not persuasive because the rejected claims are drawn to nucleic acid molecules comprising "a homolog" and "orthologs", and "the complement of SEQ ID

NO: 1 that induce disease resistance", transgenic host cells/plant and methods that employ said nucleic acid molecules rather than the nucleic acids encoding SEQ ID NO: 2 or the nucleic acid of SEQ ID NO: 1. The nucleic acid molecule comprising the complement of SEQ ID NO: 1 having disease resistance activity is rejected because the complement is the antisense strand and cannot encode a protein.

Applicant further asserts that the specification provides written description for a homolog and ortholog of SABP2. Applicant argues that 18 sequences that are identified as SABP2 homologs, and methods for identifying and obtaining are exemplified in the specification. Therefore, Applicant submit that the specification describes the nucleic acids as broadly claimed. Applicant requests that the written description rejection be withdrawn (response, paragraph bridging pages 14 and 14).

These are not persuasive because the specification neither discloses a representative number of nucleic acids of the claimed genus, nor provides structural elements that are specific to SABP2 sequences that would allow one to predictably identify what will be the identity of a homolog/ortholog of an SABP2. A substantial variation in structures and function is expected among the claimed "homolog" and "ortholog" as defined in the specification. A mere argument that the nucleic acids share structural and functional similarity with an SABP2 is not deemed persuasive. Therefore, since the instant specification does not provide adequate written description for the broad scope of the nucleic acids of the claims, host cells, transgenic plants and methods that employ said nucleic acids are similarly not described. The claims that recite SEQ ID NO: 36 are included in the rejection because SEQ ID NO: 36 is a partial

DNA encoding a partial protein, and no SABP2 function is disclosed for the sequence, therefore, SEQ ID NO: 36 is not adequately described. Therefore, the rejection is proper.

Applicant is invited to provide evidence in the form of data or 132 Declaration to support the SABP2 disease resistance function by SEQ ID NO: 36.

Claim Rejections - 35 USC § 102

Claims 1, 4-9 and 24, and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Klessig et al (US 5,977,442). This rejection is repeated for the reasons of record as set forth in the last Office action of 09/23/05. Applicant's arguments filed 01/30/06 have been fully considered and are not deemed persuasive.

Applicant asserts that the amended to the claims to recite "the" complement and "the" polypeptide and homologs thereof would obviate this rejection. Applicant argues the protein encoded by the nucleic acid disclosed by Klessing et al is a MAP kinase that does not bind to SA as required by the SABP2 of the instant invention. Applicant therefore asserts that Klessig et al fail to teach all claim limitations (response, p. 15).

This is not found persuasive because the definition of "homologs" and "orthologs" provided in the specification encompasses the prior art nucleic acid. In addition, the rejected claims do not recite the limitation "SA-binding protein". The rejected claims fail to recite any specific structural property (such as specific % of sequence identity) that would distinguish the nucleic acid of the claims from the prior art one. Therefore, the rejection is proper.

Remarks

Claims 2-3, 25-26, 31-32, and 45 are free of the prior art because the prior art does not teach or reasonably suggest SEQ ID NO: 1, 2, or 36.

Claims 2-3 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571) 272-0797. The Examiner can normally be reached Monday -Thursday from 8:00AM to 5:30PM and every other Friday from 9:00AM to 5:00 PM . Before and after final responses should be directed to fax nos. (703) 872-9306 and (703) 872-9307, respectively.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anne Marie Grunberg, can be reached at (571) 272-0975.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

4/17/06

Mai

MEDINA A. IBRAHIM
PRIMARY EXAMINER